

## BIOLOGY

### 3.5 Master Response on Approach to Salton Sea Habitat Conservation Strategy

#### 3.5.1 Introduction

Following the release of the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and Habitat Conservation Plan (HCP), Imperial Irrigation District (IID) continued to work with U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) to refine the details of Salton Sea HCP Approach 1 in an attempt to improve the reliability of mitigation for the potential take of covered piscivorous birds. Many factors raised by USFWS, CDFG, and others during the public comment were considered, including:

- Pond size and characteristics necessary to attract piscivorous birds and to maintain normal foraging behavior and densities.
- Water quality and foraging density effects on potential outbreaks of avian disease.
- Potential accumulation of selenium and other water quality constituents of concern.
- Potential problems with reduced dissolved oxygen concentrations in summer and fish kills.
- Potential winter die-off of tilapia in ponds because of low temperatures.
- Ability to support adequate densities of fish in the ponds to attract and maintain populations of foraging piscivorous birds.
- Availability of suitable pond construction sites.
- Proximity of the ponds to water delivery and drainage infrastructure.
- Water source and volume requirements.

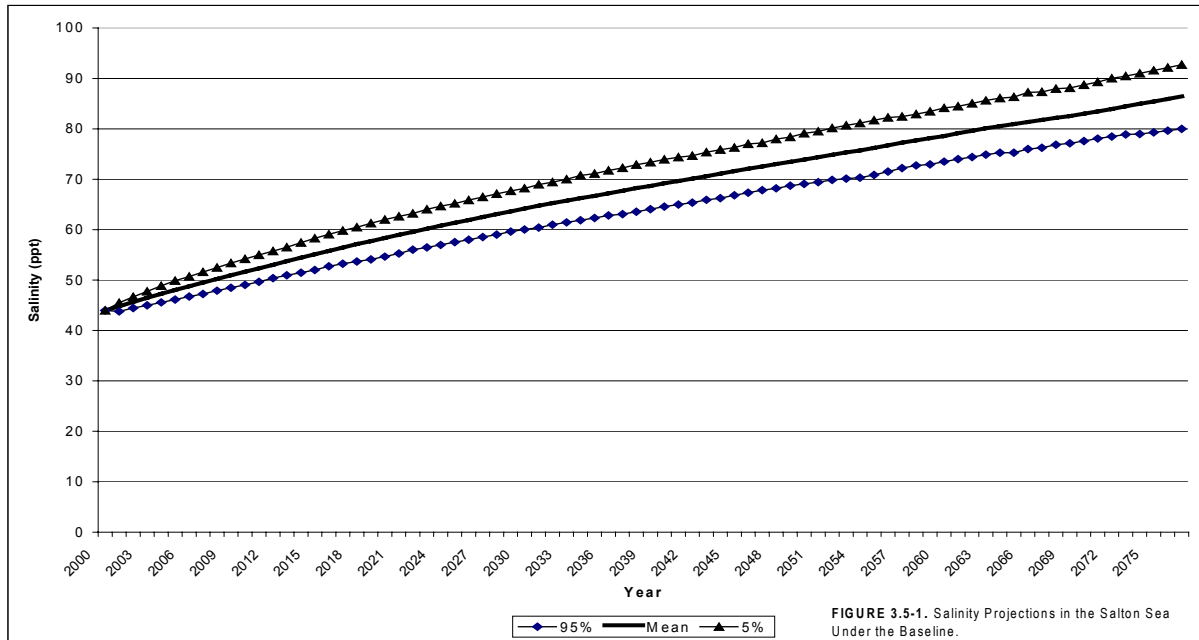
Although the mitigation strategy in Approach 1 contained many of the elements necessary to adequately mitigate the take of covered piscivorous birds, the USFWS and CDFG representatives concluded that considerable uncertainty regarding the ultimate success of the approach remained. Given this uncertainty and the absence of a suitable back-up position if the foraging pond approach failed, the resource agencies concluded that incidental take permits would not be issued if Approach 1 was used. Accordingly, IID removed the development and maintenance of foraging ponds (Approach 1) from consideration and will rely on avoidance and minimization of impacts through the use of water (Approach 2). The HCP (Attachment A to this Final EIR/EIS) has been revised to reflect the change in the approach.

### **3.5.2 Salton Sea Habitat Conservation Strategy (HCP Approach 2)**

Under the revised mitigation strategy (now referred to as the Salton Sea Habitat Conservation Strategy), IID would discharge water to the Salton Sea for the purpose of mitigating the impact of the Proposed Project on salinity in the Sea and avoiding and minimizing the indirect effects on fish and piscivorous birds. The amount of water used to mitigate Project effects on salinity and the number of years over which that water would be discharged to the Sea will be based on the projection of when salinity in the Sea would reach a level at which tilapia can no longer reproduce. By maintaining suitable salinity conditions in the Sea, IID would ensure continued persistence of fish (and therefore piscivorous birds) for a period consistent with that projected under the Salton Sea Baseline. Under this approach, piscivorous birds would be represented at the Salton Sea for the same period of time with or without the Project.

#### **Identifying Project Impacts**

Two elements of uncertainty were considered in defining the increment of impact associated with the water conservation and transfer component of the Project: 1) the uncertainty associated with the projection of when the salinity threshold (i.e., 60 ppt) for reduced fish reproduction would be reached and 2) the uncertainty associated with the accuracy of the threshold. The uncertainty associated with defining when the threshold would be reached was addressed through the modeling of the salinity in the Salton Sea. To account for the variability in the factors that influence salinity (e.g., hydrology), multiple runs of the Salton Sea model were made, with different variables in each iteration. From these model runs, the probability (mean and 5/95-percent confidence bounds) of the projected salinity trajectory under the Salton Sea Baseline was determined (Figure 3.5-1). These projections indicate a 90-percent probability that the actual salinity trajectory will fall between the lines representing the 5- and 95-percent confidence bounds. The mean of the modeled projections indicated that salinity in the Salton Sea would reach 60 ppt under the Salton Sea Baseline in the year 2023. Thus, under the assumption that 60 ppt accurately represents the threshold above which fish production and bird use will decline at the Sea, IID could avoid and minimize the impact of any Project-related take of piscivorous birds by maintaining salinity at levels less than 60 ppt until 2023.



As described in the HCP, the best available information suggests that growth, survival, and reproduction of tilapia would begin to decline at a salinity of about 60 ppt (Costa-Pierce and Reidel 2000). However, because of the complexity of the Salton Sea ecosystem and other factors that contribute to reproductive success of tilapia, the actual threshold could be lower or higher than 60 ppt. Available data are insufficient to more precisely identify the threshold or to calculate confidence bounds. Because the uncertainty associated with the salinity threshold for tilapia in the Salton Sea could not be quantified, the salinity threshold could not be addressed quantitatively in the mitigation approach. A salinity of 60 ppt was used because it represents the threshold based on the best professional judgement of scientists very familiar with this species in the Salton Sea and no information could be found in the scientific literature to suggest a different threshold should be used. The uncertainty associated with the model predictions was quantified in the form of 5- and 95-percent confidence intervals on the model projections. In order to allow the slowest reasonable increase in salinity under the Baseline to guide the mitigation requirements, the 95-percent confidence interval, which indicates that a salinity of 60 ppt would be exceeded in the year 2030, was used as the basis of the mitigation.

### Mitigation Water to the Sea

Under this revised strategy, IID would avoid the potential for take of covered piscivorous birds resulting from implementation of the water conservation and transfer component of the Project by discharging mitigation water to the Salton Sea. The amount of mitigation water would be sufficient to offset the reduction in inflow to the Salton Sea caused by the Proposed Project and to maintain salinity in the Sea at or below 60 ppt until the year 2030. The annual amount of mitigation water would be equal to the actual inflow reduction caused by the water conservation and transfer component of the Project plus or minus an amount of water necessary to maintain the target salinity trajectory. This trajectory would correspond to the salinity projection for the 95-percent confidence bound (see Figure 3.5-1)

until 2030. However, because of the continued threat of potential flooding of lands adjacent to the Salton Sea, IID would not be required to discharge mitigation water to the Sea if the discharge of that water would increase the surface elevation of the Salton Sea above the levels established by the projected elevation change associated with the Proposed Project (Figure 3.5-2). That is, IID would not be required to discharge water to the Sea during years in which the elevation of the Sea was at or above the elevation projection for the Proposed Project described in Figure 2 because of unforeseen increases in elevation (e.g., increased inflow from a major storm event). In addition, IID could discontinue to discharge water to the Salton Sea for mitigation prior to 2030 if a Salton Sea restoration project were implemented or if it could be demonstrated that tilapia were no longer successfully reproducing in the Sea.



Figure 3.5-2. Projected Mean Elevation of the Salton Sea Under Proposed Project and the Baseline.

\*\* Implementation of the Salton Sea Habitat Conservation Strategy in concert with only on-farm and system based conservation measures is not currently considered to be practicable. These "efficiency conservation" measures require a 1 to 1 ratio of mitigation water to the Sea. That is, for every AF of water conserved for transfer, an AF would need to be provided to the Sea in order to meet the obligations of the Salton Sea Habitat Conservation Strategy. This mitigation water would be provided by additional fallowing or water from other sources. The combination of conservation required to produce 300 KAFY for transfer plus conservation by fallowing to produce the related amount of mitigation water to meet the obligations of the Salton Sea Habitat Conservation Strategy has not been assessed in this Draft EIR/EIS. It is noted, however, that the source of mitigation water to implement the Salton Sea Habitat Conservation Strategy is not limited to fallowing or other Colorado River water provided by IID. If IID elects to pursue implementation of efficiency conservation together with the Salton Sea Habitat Conservation Strategy, additional environmental analysis may be required depending on the quantity and source of mitigation water. However, some combination of efficiency conservation measures and fallowing could potentially be implemented with the Salton Sea Habitat Conservation Strategy, although the amount of each that would be required to feasibly satisfy the Salton Sea Habitat Conservation Strategy has not been determined.

## Water Sources

Mitigation water sources to offset Project-related inflow reductions could be acquired by IID by fallowing in the Imperial Valley or by using any other legally permissible water provided to IID for this purpose by other parties to the Quantification Settlement Agreement, by state

or federal agencies, or by any other third parties willing to contribute to the mitigation effort, or any combination of the foregoing. The use of water obtained by IID from sources outside the Imperial Valley could require appropriate subsequent environmental review. The amount of water discharged to the Sea would be calculated annually based on the proportion of efficiency conservation (e.g., system and on-farm) and fallowing used to generate the water for transfer.\*\* As previously described, the amount of water discharged annually would match the anticipated Project-related reduction in inflow plus or minus any increment necessary to maintain the salinity trajectory but not to exceed the elevation levels projected for the Project as described above.

## Conclusion

By maintaining suitable salinity conditions in the Sea, IID would ensure continued persistence of fish (and therefore piscivorous birds covered by the HCP) for a period consistent with that projected under the Salton Sea Baseline. Under this approach, the level and duration of use of the Salton Sea by piscivorous birds would be expected to be the same as under the Salton Sea Baseline. In addition, maintaining the salinity trajectory associated with the 95-percent confidence bound until 2030 likely would result in a deceleration in the rate of salinization in the Sea. Any improvement over the Salton Sea Baseline likely would provide indirect benefits to salt-sensitive species, including several of the sport fish species that are the basis for the recreational sport fishery.

Avoiding salinity impacts would also result in the avoidance of biological impacts associated with changes in surface elevation. Because water surface elevation in the Sea under this strategy would be held at or above the Salton Sea Baseline projections, to 2030 conservation-related changes in the use of nesting islands by covered species would not occur as a result of the Project. Likewise, potential impacts on the tamarisk scrub community adjacent to the Sea (e.g., shoreline strand) would not be affected by the Project prior to 2030 and might be avoided altogether. Implementation of this strategy also provides the ancillary benefit of allowing time for a Salton Sea restoration project to be developed.

Mitigation for air quality impacts associated with the decline of elevation after the year 2030 is described in the Master Response on *Air Quality – Salton Sea Air Quality Monitoring and Mitigation Plan*. It should be noted that although the Salton Sea Habitat Conservation Strategy would provide mitigation water to the Sea until 2030, because the elevation would be maintained above the Baseline projection up to 2030, the elevation would not fall below the Baseline projection until the year 2035.

### 3.6 Master Response on Impact Determination for Fish in the Salton Sea

Conservation and transfer of water to San Diego County Water Authority, Coachella Valley Water District, and/or Metropolitan Water District of Southern California would accelerate the salinization of the Salton Sea. This accelerated salinization under the Proposed Project and Alternatives would mean that salinity tolerances of fish in the Salton Sea would be exceeded earlier than under the Baseline. Therefore, in the absence of mitigation, the Proposed Project is anticipated to result in the loss of fish earlier than under the Baseline. This accelerated change in the fish community of the Salton Sea under the Proposed Project is not considered a significant impact on fish resources for the following reasons.

Section 3.2.4.2 of the Draft Environmental Impact Report/Environmental Impact Statement lists the significance criteria used to assess the impacts of the Proposed Project. A significant impact would occur if the Proposed Project:

- (1) Causes a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS).
- (2) Causes a substantial adverse effect on native riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.
- (3) Causes a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruptions, or other means.
- (4) Interferes substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native fish and wildlife nursery sites.
- (5) Conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- (6) Conflicts with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional, or state HCP.

Significance criteria 2 and 3 do not apply to fish. Criteria 5 and 6 are not applicable because there are no local policies or ordinances protecting the non-native fish of the Salton Sea and there are no approved or adopted conservation plans that address the non-native fish of the Salton Sea. Criterion 4 addresses potential effects to native fish and wildlife. With the exception of the desert pupfish, all of the fish of the Salton Sea were introduced to the Salton Sea and are not native to inland waters of California. Based on Criterion 4, because the fish are not native and were introduced, effects of the accelerated salinization of the Sea on their movement and reproduction do not constitute a significant impact. Finally, Criterion 1 address effects to species that are designated as having special status. With the exception of

desert pupfish, the fish of the Salton Sea do not have any special status, and therefore effects of the project on the fish do not constitute a significant impact.

The fish of the Salton Sea provide a forage base for a large number and variety of fish-eating birds. Some of the piscivorous birds using the Salton Sea have special state or federal status (e.g., white pelican, double-crested cormorant). The accelerated changes in the fish community under the Proposed Project would adversely affect habitat for these special-status bird species. This impact was evaluated under Impact BR - 46 and was considered potentially significant. With implementation of the HCP component of the Project, and specifically the *Biology – Salton Sea Habitat Conservation Strategy* described in the Master Response in Section 3, the potential impacts would be reduced to less than significant.

The desert pupfish is a native fish inhabiting the Salton Sea and also has special state and federal status. The impacts of the Proposed Project on desert pupfish were individually evaluated (Impact BR - 51) and were considered potentially significant. With implementation of the HCP component of the Project, the potential impacts were reduced to less than significant.

## 3.7 Master Response on Timing of Implementation of Biological Mitigation Measures

### 3.7.1 Introduction

A number of commenters criticized the mitigation measures for biological impacts, stating that they are deferred mitigation with reliance on future studies or that they are not described in enough detail. Although the specific comments varied, the issues in the comments were as follows:

- (1) The Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) indicates that site-specific studies will be conducted as needed and mitigation measures will be identified prior to actual implementation of the conservation measures. Such studies and the identification of feasible mitigation measures need to be completed prior to Project approval.
- (2) The documents fail to describe the plan to be implemented and improperly defer formulation, selection, and analysis of mitigation measures.

### 3.7.2 CEQA and NEPA Requirements

Several of the comments referred to the California Environmental Quality Act (CEQA) Guidelines requirements that “[F]ormulation of mitigation measures should not be deferred until some future time” [Section 15126.4(a)(1)(B)]. The commenters neglected to cite the next sentence in the Guidelines, which states, “measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.” Thus, the CEQA Guidelines specifically provide for a mitigation standard which can be met in a variety of ways.

Both CEQA and National Environmental Policy Act (NEPA) case law recognize that there are circumstances in which it is not feasible to provide all the details necessary to implement a mitigation measure. There has also been recognition that for some projects there may be a range of mitigation options available; it is not necessary in the EIR/EIS to select one strategy from the range of options to meet a mitigation standard.

In Sacramento Old City Assn. v. City Council (1991) 229 Cal. App.3d 1011, the Court upheld traffic mitigation as adequate where the mitigation required preparation of a Transportation Management Plan and listed seven additional potential measures to reduce traffic and parking impacts without specifically selecting measures from the seven. Addressing the issue of deferral of mitigation in a situation where a precise formulation of the mitigation measures was impractical, the Court stated, “the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval. Where future action to carry a project forward is contingent on devising means to satisfy such criteria, the agency should be able to rely on its commitment as evidence that significant impacts will in fact be mitigated.”<sup>14</sup>

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<sup>14</sup> Id. at 1029, quoting Remy et al., Guide to the Cal. Environmental Quality Act (1991 ed.) pp. 200-201, fn. omitted.



To summarize, in situations where it is not feasible to provide all mitigation details, the requirements of an adequate measure are: (1) commitment to mitigation, and (2) a performance standard.

There are valid reasons why it is not feasible to provide all the details to implement the biological mitigation measures at this time. As described in the EIR/EIS, in some cases there are alternative methods or options to meet mitigation performance standards. It is not practicable to fully develop the mitigation specifics because the best methodology to achieve the mitigation commitment will be selected based on future regulatory agency decisions. For several of the measures, the results of future studies are necessary in order to ensure that a measure is as effective as possible. For example, the Habitat Conservation Plan (HCP) (Attachment A of this Final EIR/EIS) states that the “USFWS [U.S. Fish and Wildlife Service] currently is funding a study to evaluate the effects of selenium on desert pupfish. Other future studies might also evaluate the potential effects of selenium on pupfish and identify important concentration thresholds.” Because of the importance of these future studies in determining the effects of selenium on pupfish, the mitigation measure appropriately links specific implementation measures to the results of those future studies.

For the HCP as it appears in the Draft EIR/EIS, the text of Section 5.2, Plan Implementation, has been expanded to elaborate on the decisionmaking processes and approvals. Imperial Irrigation District (IID) will be responsible for implementing the HCP requirements. Although the HCP Implementation Team (IT) will have the authority to recommend adjustments in the implementation of the HCP, only the USFWS and California Department of Fish and Game (CDFG) can determine whether future adjustments are in compliance with the HCP requirements. Table 5.2-1 has been added to the HCP, which lists the actions that require approval from the USFWS and CDFG.

### 3.7.3 Specific Mitigation Measures

The Draft EIR/EIS provided an adequate level of detail about the mitigation measures. Some of the specific measures referenced in the comments are discussed below as examples of the manner in which the measures meet the requirements of CEQA and NEPA.

A commenter objected to HCP mitigation measure Salton Sea – 3 because it has not been determined whether IID will create or acquire habitat. It is not feasible at this point in time to develop a habitat creation plan because no specific site for habitat creation has been selected. The mitigation measure complies with CEQA and NEPA because it outlines IID’s commitment to offset a net loss (if one occurs) of tamarisk habitat with creation or acquisition of native tree habitat consisting of mesquite bosque or cottonwood-willow habitat and includes a formula for determining the mitigation ratio.

A commenter objected to HCP mitigation measure Pupfish – 3. This measure cannot be further defined at this time because implementation is linked to extending or modifying existing IID drains as the Salton Sea recedes. The measure complies with CEQA and NEPA because IID commits to no net loss of pupfish drain habitat in the Imperial Valley (see measure Pupfish – 1) and commits to actively increase pupfish habitat in areas exposed by a receding Sea.

A commenter objected to HCP mitigation measures Pupfish – 4 and Pupfish – 5. Measure Pupfish – 4 is proposed in order to determine whether modification of IID maintenance

practices could reduce the potential for maintenance activities to take pupfish. It is not appropriate to require more specific mitigation or determine a precise way to meet the general goal of reducing impacts until the efficacy of modifying maintenance practices is determined. Measure Pupfish - 5 relates to construction activities. The measure complies with CEQA and NEPA because of the commitment to gradually dewater to encourage downstream movement of the fish away from construction and to transport any pupfish stranded in the affected portion of the drain. It is not necessary to develop the guidelines for relocating the fish at this time because the measure identifies IID's commitment and the responsible parties.

A commenter objected to HCP (Appendix C of the Draft EIR/EIS) measures Other Species - 1 and 2. As stated in Section 3.9, Other Species, there are 25 species for which existing information on the ecology and distribution in the HCP area is limited or that might not be found in the HCP area. The information gained through measure Other Species - 1 will enable the USFWS and CDFG along with the HCP IT to make more informed selections of techniques to meet the mitigation commitment. As described in the text and Figure 3.9.1 (Process for Addressing Other Covered Species) of the Draft EIR/EIS, the USFWS and the CDFG have final approval authority for the study program in measure Other Species -1 and the avoidance, minimization, and mitigation measures referenced in measure Other Species - 2. As stated in Section 3.9.2, Effects to Other Covered Species, of the Draft HCP, implementation of the two measures will provide an overall benefit to the covered species by providing a substantial contribution to understanding these species and implementing measures to conserve these species. Because none of the Covered Species in Table 3.9.1 is currently listed, they are afforded minimal to no protection under state or federal law. Implementing protective measures over an extended period of time would provide a long-term benefit to these species in the revised HCP area, contribute to improved management elsewhere, and possibly prevent the need to list them in the future.

As part of the Response to Comments and this Final EIR/EIS process, HCP Section 3.9, Other Covered Species (see Attachment A to this Final EIR/EIS), has been expanded, measures Other Species -1 and -2 have been revised, and a new Appendix H, providing specific avoidance and mitigation measures for 25 other covered species, has been added. The additional text added to Section 3.9 of the HCP (Attachment A to this Final EIR/EIS) provides more detail on each of the 25 Other Covered Species and expands the analysis of the effects to the Other Covered Species. The new Appendix H to the revised HCP details IID's commitment to interim avoidance, minimization, and mitigation measures for the 25 species. During and following completion of the study program for these species (Mitigation Measure Other Species -1), the HCP IT will review the measures and adjust or revise them as necessary, with approval from the USFWS and CDFG. This refinement process is appropriate because of the need to incorporate information from the study program and because the interim measures contain a commitment to mitigation and a standard that will be met for each species.